Search Results -

Terms	Documents
L2 and classif\$7 and audio and video and text and feature\$2	15

US Pre-Grant Publication Full-Text Database

US Patents Full-Text Database

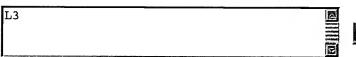
US OCR Full-Text Database

Database: EPO Abstracts Database JPO Abstracts Database

Derwent World Patents Index

IBM Technical Disclosure Bulletins

Search:











Search History

DATE: Tuesday, November 09, 2004 Printable Copy Create Case

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y side result set

DB=PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD; PLUR=NO; OP=OR

L2 and classif\$7 and audio and video and text and feature\$2 15 L3

<u>L2</u> 706/20.ccls. 525 <u>L2</u>

<u>L1</u> 706/20/.ccls. 0 <u>L1</u>

Hit List



Search Results - Record(s) 1 through 15 of 15 returned.

☐ 1. Document ID: US 20040010480 A1

Using default format because multiple data bases are involved.

L3: Entry 1 of 15

File: PGPB

Jan 15, 2004

Jan 1, 2004

PGPUB-DOCUMENT-NUMBER: 20040010480

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040010480 A1

TITLE: Method, apparatus, and program for evolving neural network architectures to

detect content in media information

PUBLICATION-DATE: January 15, 2004

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY RULE-47 Agnihotri, Lalitha Fishkill NY US Schaffer, James David Wappingers Falls NY US Dimitrova, Nevenka Yorktown Heights NY US McGee, Thomas Garrison NY US Jeannin, Sylvie Paris FR

US-CL-CURRENT: <u>706/20</u>; <u>706/13</u>, <u>706/16</u>, <u>706/25</u>, <u>706/31</u>

Full	Title	e Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw, De
	2.	Docume	nt ID:	US 20	040002931	A 1						

File: PGPB

PGPUB-DOCUMENT-NUMBER: 20040002931

PGPUB-FILING-TYPE: new

L3: Entry 2 of 15

DOCUMENT-IDENTIFIER: US 20040002931 A1

TITLE: Probability estimate for K-nearest neighbor

PUBLICATION-DATE: January 1, 2004

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY RULE-47 Platt, John C. Bellevue WA US
Burges, Christopher J.C. Bellevue WA US

Record List Display Page 2 of 7

US-CL-CURRENT: 706/46; 706/20

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KMC Draw. De

☐ 3. Document ID: US 20030061185 A1

L3: Entry 3 of 15

File: PGPB

Mar 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030061185

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030061185 A1

TITLE: System and method of separating signals

PUBLICATION-DATE: March 27, 2003

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY RULE-47

Lee, Te-Won San Diego CA US
Lewicki, Michael S. Pittsburgh PA US
Sejnowski, Terrence J. Solana Beach CA US

US-CL-CURRENT: 706/20

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KWC Draw. De

4. Document ID: US 20020165839 A1

L3: Entry 4 of 15

File: PGPB

Nov 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020165839

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020165839 A1

TITLE: Segmentation and construction of segmentation <u>classifiers</u>

PUBLICATION-DATE: November 7, 2002

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY RULE-47

Taylor, Kevin M. Upper Arlington OH US Whitney, Paul D. Richland WA US

US-CL-CURRENT: 706/20

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KWIC Draw. De

☐ 5. Document ID: US 20020120594 A1

L3: Entry 5 of 15

File: PGPB

Aug 29, 2002

PGPUB-DOCUMENT-NUMBER: 20020120594

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020120594 A1

TITLE: Method and device for perception of an object by its shape, its size and/or

its orientation

PUBLICATION-DATE: August 29, 2002

INVENTOR-INFORMATION:

NAME

CITY

STATE

COUNTRY

RULE-47

Pirim, Patrick

Paris

FR

US-CL-CURRENT: <u>706/20</u>

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw, De
•						·····						
	6 1	Docume	nt ID:	119 67	00170 P2							

☐ 6. Document ID: US 6799170 B2

L3: Entry 6 of 15

File: USPT

Sep 28, 2004

US-PAT-NO: 6799170

DOCUMENT-IDENTIFIER: US 6799170 B2

TITLE: System and method of separating signals

DATE-ISSUED: September 28, 2004

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Lee; Te-Won

San Diego

CA

Lewicki; Michael S.

Pittsburgh

PA

Sejnowski; Terrence J.

Solana Beach

CA

US-CL-CURRENT: <u>706/20</u>; <u>706/22</u>, <u>706/25</u>

Full Title Citation Front Review Classification Date Reference Reference Citation Claims KMC Draw. De

7. Document ID: US 6760715 B1

L3: Entry 7 of 15

File: USPT

Jul 6, 2004

US-PAT-NO: 6760715

DOCUMENT-IDENTIFIER: US 6760715 B1

TITLE: Enhancing biological knowledge discovery using multiples support vector machines

Sep 30, 2003

Sep 9, 2003

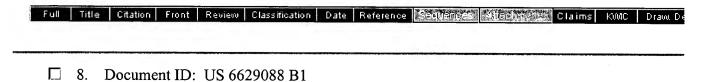
DATE-ISSUED: July 6, 2004

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Barnhill; Stephen Savannah GA Guyon; Isabelle Berkeley CA Weston; Jason New York NY

US-CL-CURRENT: 706/16; 706/12, 706/20, 706/25, 706/45



File: USPT

US-PAT-NO: 6629088

L3: Entry 8 of 15

DOCUMENT-IDENTIFIER: US 6629088 B1

TITLE: Method and apparatus for measuring the quality of descriptors and

description schemes

DATE-ISSUED: September 30, 2003

INVENTOR-INFORMATION:

NAME

CITY STATE ZIP CODE COUNTRY

Rising, III; Hawley K. San Jose CA

US-CL-CURRENT: $\frac{706}{12}$; $\frac{706}{20}$, $\frac{706}{45}$, $\frac{706}{46}$

Full	Title	Citation	Front	Review	Classification	Date	Reference	Construction All Schine 1142	Claims	KWIC	Draw, De
	9.	Docume	nt ID:	US 66	18716 B1		***************************************				

File: USPT

US-PAT-NO: 6618716

L3: Entry 9 of 15

DOCUMENT-IDENTIFIER: US 6618716 B1

TITLE: Computational architecture for managing the transmittal and rendering of

information, alerts, and notifications

DATE-ISSUED: September 9, 2003

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Horvitz; Eric Kirkland WA

US-CL-CURRENT: 706/55; 706/20

Full Title Citation Front Review Classification Date Reference Reference Claims KMC Draw, De

☐ 10. Document ID: US 6556983 B1

L3: Entry 10 of 15

File: USPT

Apr 29, 2003

US-PAT-NO: 6556983

DOCUMENT-IDENTIFIER: US 6556983 B1

** See image for Certificate of Correction **

TITLE: Methods and apparatus for finding semantic information, such as usage logs, similar to a query using a pattern lattice data space

DATE-ISSUED: April 29, 2003

INVENTOR - INFORMATION:

NAME CITY

Altschuler; Steven

Redmond

STATE ZIP CODE COUNTRY

Ingerman; David V.

Princeton

WA NJ

Wu; Lani

Redmond

WA

Zhao; Lei

Bellevue

WA

US-CL-CURRENT: 706/55; 706/11, 706/20, 706/21

Full Title Citation Front Review Classification Date Reference Schoolings Stationary Claims KMC Draw De

☐ 11. Document ID: US 6526395 B1

L3: Entry 11 of 15

File: USPT

Feb 25, 2003

US-PAT-NO: 6526395

DOCUMENT-IDENTIFIER: US 6526395 B1

** See image for Certificate of Correction **

TITLE: Application of personality models and interaction with synthetic characters in a computing system

DATE-ISSUED: February 25, 2003

INVENTOR - INFORMATION:

NAME

CITY

STATE

ZIP CODE

COUNTRY

Morris; Tonia G.

Chandler

AZ

US-CL-CURRENT: 706/20; 706/15

Full Title Citation Front Review Classification Date Reference Section 6 Appropries Claims KMIC Draw, De

☐ 12. Document ID: US 6424960 B1

Record List Display Page 6 of 7

L3: Entry 12 of 15

File: USPT

Jul 23, 2002

US-PAT-NO: 6424960

DOCUMENT-IDENTIFIER: US 6424960 B1

TITLE: Unsupervised adaptation and classification of multiple classes and sources in blind signal separation

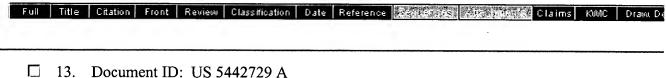
DATE-ISSUED: July 23, 2002

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Lee; Te-Won San Diego CA Lewicki; Michael S. Pittsburgh PA Sejnowski; Terrence J. Solana Beach CA

US-CL-CURRENT: 706/20; 600/310, 600/515



L3: Entry 13 of 15 File: USPT Aug 15, 1995

US-PAT-NO: 5442729

DOCUMENT-IDENTIFIER: US 5442729 A

TITLE: Strain-sensing goniometers, systems and recognition algorithms

DATE-ISSUED: August 15, 1995

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Kramer; James F. Stanford CA San Francisco George; William R. CA Lindener; Peter Los Altos CA

US-CL-CURRENT: 704/271; 128/925, 600/595, 706/20

Full	Title	Citation	Front	Review	Classification	Date	Reference	的方面的問題	Claims	KWIC	Draw, De
										•	
	14.	Docum	ent ID	: US 4	802103 A						
L3: E	ntry	14 of	.15				File: U	SPT	Jan	31,	1989

US-PAT-NO: 4802103

DOCUMENT-IDENTIFIER: US 4802103 A

TITLE: Brain learning and recognition emulation circuitry and method of recognizing events

DATE-ISSUED: January 31, 1989

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE COUNTRY

Faggin; Federico

Los Altos Hills

CA

Lynch; Gary S.

Irvine

CA

US-CL-CURRENT: 706/38; 382/157, 706/20, 706/25, 706/30



L3: Entry 15 of 15

File: USPT

Sep 20, 1988

US-PAT-NO: 4773024

DOCUMENT-IDENTIFIER: US 4773024 A

TITLE: Brain emulation circuit with reduced confusion

DATE-ISSUED: September 20, 1988

INVENTOR - INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Faggin; Frederico

Los Altos Hills

CA

Lynch; Gary S.

Irvine

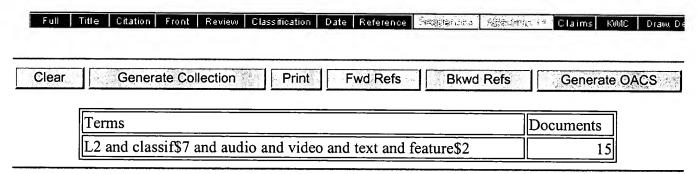
CA

Sukonick; Josef S.

Saratoga

CA

US-CL-CURRENT: <u>706/20</u>; <u>382/157</u>, <u>706/26</u>, <u>706/30</u>



Change Format **Display Format:**

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Search Results -

Terms	Documents
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Database:

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DATE: Tuesday, November 09, 2004 Printable Copy Create Case

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<u>L4</u>	L3 and disparate	0	<u>L4</u>
<u>L3</u>	L2 and classif\$7 and audio and video and text and feature\$2	15	<u>L3</u>
<u>L2</u>	706/20.ccls.	525	<u>L2</u>
<u>L1</u>	706/20/.ccls.	0	L1

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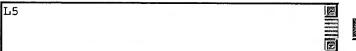
Terms	Documents
L3 and concatenating	0

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<u>L5</u>	L3 and concatenating	0	<u>L5</u>
<u>L4</u>	L3 and disparate	0	<u>L4</u>
<u>L3</u>	L2 and classif\$7 and audio and video and text and feature\$2	2 15	<u>L3</u>
<u>L2</u>	706/20.ccls.	525	<u>L2</u>
<u>L1</u>	706/20/.ccls.	0	L1

Search Results -

Terms	Documents
L3 and combin\$5	15

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
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<u>L6</u>	L3 and combin\$5	15	<u>L6</u>
<u>L5</u>	L3 and concatenating	0	<u>L5</u>
<u>L4</u>	L3 and disparate	0	<u>L4</u>
<u>L3</u>	L2 and classif\$7 and audio and video and text and feature\$2	2 15	<u>L3</u>
<u>L2</u>	706/20.ccls.	525	<u>L2</u>
<u>L1</u>	706/20/.ccls.	0	L1

Search Results -

Terms	Documents
classif\$7 and audio and video and text and feature\$2 and concatenating	180

US Pre-Grant Publication Full-Text Database US Patents Full-Text Database

US OCR Full-Text Database

Database: EPO Abstracts Database JPO Abstracts Database

Derwent World Patents Index

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DATE: Tuesday, November 09, 2004 Printable Copy Create Case

Set Name side by side	Query	<u>Hit</u> Count	Set Name result set
DB=P	GPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=NO; OP=OR		
<u>L7</u>	classif\$7 and audio and video and text and feature\$2 and concatenating	180	<u>L7</u>
<u>L6</u>	L3 and combin\$5	15	<u>L6</u>
<u>L5</u>	L3 and concatenating	0	<u>L5</u>
<u>L4</u>	L3 and disparate	0	<u>L4</u>
<u>L3</u>	L2 and classif\$7 and audio and video and text and feature\$2	15	<u>L3</u>
<u>L2</u>	706/20.ccls.	525	<u>L2</u>
<u>L1</u>	706/20/.ccls.	0	L1

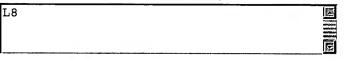
Search Results -

Terms	Documents
L7 and visual and text\$3 and multi adj media	13

Database:

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US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
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Search:











Search History

DATE: Tuesday, November 09, 2004 Printable Copy Create Case

Set Name side by side	Query	<u>Hit</u> <u>Count</u>	Set Name result set
DB=PC	GPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD; PLUR=NO; OP=OR		
<u>L8</u>	L7 and visual and text\$3 and multi adj media	13	<u>L8</u>
<u>L7</u>	classif\$7 and audio and video and text and feature\$2 and concatenating	180	<u>L7</u>
<u>L6</u>	L3 and combin\$5	15	<u>L6</u>
<u>L5</u>	L3 and concatenating	0	<u>L5</u>
<u>L4</u>	L3 and disparate	0	<u>L4</u>
<u>L3</u>	L2 and classif\$7 and audio and video and text and feature\$2	15	<u>L3</u>
<u>L2</u>	706/20.ccls.	525	<u>L2</u>
<u>L1</u>	706/20/.ccls.	0	<u>L1</u>

Hit List

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Search Results - Record(s) 1 through 13 of 13 returned.

☐ 1. Document ID: US 20040218451 A1

Using default format because multiple data bases are involved.

L8: Entry 1 of 13

File: PGPB

Nov 4, 2004

PGPUB-DOCUMENT-NUMBER: 20040218451

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040218451 A1

TITLE: Accessible user interface and navigation system and method

PUBLICATION-DATE: November 4, 2004

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY RULE-47

Said, Joe P. West Lafayette IN US Schleppenbach, David A. West Lafayette

US

US-CL-CURRENT: 365/222

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draws De

☐ 2. Document ID: US 20030220973 A1

L8: Entry 2 of 13 File: PGPB Nov 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030220973

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030220973 A1

TITLE: Conference recording system

PUBLICATION-DATE: November 27, 2003

INVENTOR - INFORMATION:

NAME CITY STATE COUNTRY RULE-47

Zhu, Min Los Altos CA US Wei, Songxiang San Jose CA US Pong, Alfred Lian Fui Burlingame CA US

US-CL-CURRENT: 709/205

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Drawd (

☐ 3. Document ID: US 20030088575 A1

L8: Entry 3 of 13 File: PGPB May 8, 2003

PGPUB-DOCUMENT-NUMBER: 20030088575

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030088575 A1

TITLE: Poly vectoral reverse navigation

PUBLICATION-DATE: May 8, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Gould, Eric Justin	Austin	TX	US	
Buckmaster, Janna	Austin	TX	US	
Wilkens, Todd	San Francisco	CA	US	
Trisnadi, Paulus W.	Austin	TX	US	

US-CL-CURRENT: 707/102

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw, De
· []	4. I	 Docume	ent ID:	US 67	45201 B2	×	Jan					Warnish and the same of the sa
		4 of 1					File: U	JSPT		Jun	1,	2004

US-PAT-NO: 6745201

DOCUMENT-IDENTIFIER: US 6745201 B2

TITLE: Poly vectoral reverse navigation

DATE-ISSUED: June 1, 2004

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY Gould; Eric Justin Austin TXBuckmaster; Janna Austin TX Wilkens; Todd San Francisco CA Trisnadi; Paulus W. Austin ТX

US-CL-CURRENT: <u>707/102</u>



□ 5. Document ID: US 6505209 B1

L8: Entry 5 of 13

File: USPT

Jan 7, 2003

US-PAT-NO: 6505209

DOCUMENT-IDENTIFIER: US 6505209 B1

TITLE: Poly vectoral reverse navigation

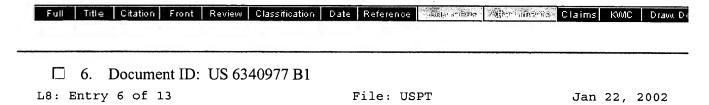
DATE-ISSUED: January 7, 2003

INVENTOR - INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Gould; Eric Justin Austin TX
Buckmaster; Janna Austin TX
Wilkens; Todd San Francisco CA
Trisnadi; Paulus W. Austin TX

US-CL-CURRENT: 707/102; 707/1, 707/100, 707/3, 715/526



US-PAT-NO: 6340977

DOCUMENT-IDENTIFIER: US 6340977 B1

TITLE: System and method for dynamic assistance in software applications using

behavior and host application models

DATE-ISSUED: January 22, 2002

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Lui; Philip New York NY 10011 Kopytnik; Zbigniew Jersey City NJ 07305

US-CL-CURRENT: 715/709; 715/706

Full	Title	Citation	Front	Review	Classification	Date	Reference	Francisco Contraction	Min Printing CI	a ims	KWIC	Draw, D
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	/. 1	Docume	mid.	03 01	99062 DI							
L8: E	ntry	7 of 1	L 3				File: U	JSPT		Mar	6,	2001

US-PAT-NO: 6199082

DOCUMENT-IDENTIFIER: US 6199082 B1

 ${\tt TITLE:}$ Method for delivering separate design and content in a multimedia publishing system

Record List Display Page 4 of 7

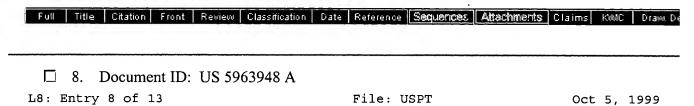
DATE-ISSUED: March 6, 2001

INVENTOR - INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Ferrel; Patrick J. Seattle WA
Meyer; Robert F. Redmond WA
Millet; Stephen J. Seattle WA
Shewchuk; John P. Seattle WA
Smith; Walter W. Seattle WA

US-CL-CURRENT: 715/522; 715/515



US-PAT-NO: 5963948

DOCUMENT-IDENTIFIER: US 5963948 A

TITLE: Method for generating a path in an arbitrary physical structure

DATE-ISSUED: October 5, 1999

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Shilcrat; Esther Dina Stony Brook NY 11790

 $\text{US-CL-CURRENT: } \underline{707/100}; \ \underline{340/995.19}, \ \underline{701/200}, \ \underline{701/207}, \ \underline{701/209}, \ \underline{707/1}, \ \underline{707/3}, \ \underline{707/4} \\ \underline{707/4}, \ \underline{701/209}, \$

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draint Di
	9.	Docume	nt ID:	US 56	84945 A							
L8: E	Intry	9 of 1	.3				File: U	SPT		Nov	4.	1997

US-PAT-NO: 5684945

DOCUMENT-IDENTIFIER: US 5684945 A

** See image for Certificate of Correction **

TITLE: System and method for maintaining performance data in a data processing

system

DATE-ISSUED: November 4, 1997

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Chen; James Newman Austin TX Ross; Joseph Clinton Georgetown TX

Record List Display Page 5 of 7

US-CL-CURRENT: 714/20; 714/25, 714/57

Full Title Citation Front Review Classification Date Reference

☐ 10. Document ID: US 5553235 A

L8: Entry 10 of 13

File: USPT

Sep 3, 1996

US-PAT-NO: 5553235

DOCUMENT-IDENTIFIER: US 5553235 A

TITLE: System and method for maintaining performance data in a data processing

system

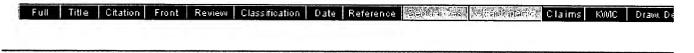
DATE-ISSUED: September 3, 1996

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Chen; James N. Austin TX Ross; Joseph C. Georgetown TX

US-CL-CURRENT: <u>714/20</u>; <u>714/57</u>



☐ 11. Document ID: US 5506955 A

L8: Entry 11 of 13

File: USPT Apr 9, 1996

US-PAT-NO: 5506955

DOCUMENT-IDENTIFIER: US 5506955 A

TITLE: System and method for monitoring and optimizing performance in a data

processing system

DATE-ISSUED: April 9, 1996

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Chen; James N. Austin TX
Christiansen; Niels Austin TX
Ross; Joseph C. Georgetown TX

US-CL-CURRENT: <u>714/26</u>; <u>714/47</u>



☐ 12. Document ID: US 5483468 A

L8: Entry 12 of 13

File: USPT

Jan 9, 1996

US-PAT-NO: 5483468

DOCUMENT-IDENTIFIER: US 5483468 A

TITLE: System and method for concurrent recording and displaying of system

performance data

DATE-ISSUED: January 9, 1996

INVENTOR - INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Chen; James N. Austin TX
Christiansen; Niels Austin TX
Ross; Joseph C. Georgetown TX

Rowan; Albert T. Austin

US-CL-CURRENT: 702/186; 345/418



☐ 13. Document ID: US 5432932 A

L8: Entry 13 of 13

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TX

Jul 11, 1995

US-PAT-NO: 5432932

DOCUMENT-IDENTIFIER: US 5432932 A

TITLE: System and method for dynamically controlling remote processes from a performance monitor

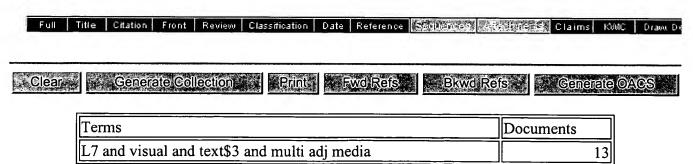
DATE-ISSUED: July 11, 1995

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Chen; James N. Austin TX
Christiansen; Niels Austin TX
Ross; Joseph C. Georgetown TX
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US-CL-CURRENT: 718/103; 702/179, 715/965



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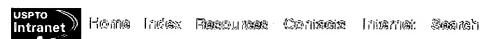




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(Listing of Electronic Interface Buses with links to standards and specifications.)

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(The IETF Secretariat, run by The Corporation for National Research Initiatives with funding from the US government, maintains an index of Internet-Drafts.)

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PCI Specifications (username: uspto; password: pat222)

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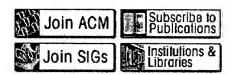
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1 Poster session and reception: News video classification using SVM-based multimodal classifiers and combination strategies



Wei-Hao Lin, Alexander Hauptmann

December 2002 Proceedings of the tenth ACM international conference on Multimedia

Full text available: pdf(103.22 KB) Additional Information: full citation, abstract, references, citings

Video classification is the first step toward multimedia content understanding. When video is classified into conceptual categories, it is usually desirable to combine evidence from multiple modalities. However, combination strategies in previous studies were usually ad hoc. We investigate a meta-classification combination strategy using Support Vector Machine, and compare it with probability-based strategies. Text features from closedcaptions and visual features from images are combined to cla ...

2 Research track posters: Semantic representation: search and mining of multimedia content



Apostol (Paul) Natsev, Milind R. Naphade, John R. Smith

August 2004 Proceedings of the 2004 ACM SIGKDD international conference on Knowledge discovery and data mining

Full text available: pdf(158.48 KB) Additional Information: full citation, abstract, references, index terms

Semantic understanding of multimedia content is critical in enabling effective access to all forms of digital media data. By making large media repositories searchable, semantic content descriptions greatly enhance the value of such data. Automatic semantic understanding is a very challenging problem and most media databases resort to describing content in terms of low-level features or using manually ascribed annotations. Recent techniques focus on detecting semantic concepts in video, such as ...

Keywords: TRECVID, model vectors, semantic indexing

3 Content analysis: A mid-level representation framework for semantic sports video analysis



Ling-Yu Duan, Min Xu, Tat-Seng Chua, Qi Tian, Chang-Sheng Xu

November 2003 Proceedings of the eleventh ACM international conference on Multimedia

Full text available: pdf(1.42 MB)

Additional Information: full citation, abstract, references, index terms

Sports video has been widely studied due to its tremendous commercial potentials. Despite encouraging results from various specific sports games, it is almost impossible to extend a system for a new sports game because they usually employ different sets of low-level features appropriate for the specific games and closely coupled with the use of game specific rules to detect events or highlights. There is a lack of internal representation and structure to be generic and applicable for many differ ...

Keywords: events, mid-level representation, semantics, sports video

4 Multimodal interaction: Articulatory features for robust visual speech recognition Kate Saenko, Trevor Darrell, James R. Glass October 2004 Proceedings of the 6th international conference on Multimodal interfaces

Full text available: pdf(358.83 KB) Additional Information: full citation, abstract, references, index terms

Visual information has been shown to improve the performance of speech recognition systems in noisy acoustic environments. However, most audio-visual speech recognizers rely on a clean visual signal. In this paper, we explore a novel approach to visual speech modeling, based on articulatory features, which has potential benefits under visually challenging conditions. The idea is to use a set of parallel classifiers to extract different articulatory attributes from the input images, and then c ...

Keywords: articulatory features, audio-visual speech recognition, multimodal interfaces. speechreading, visual feature extraction

Image and video digital libraries: Multi-modal classification in digital news libraries Ming-yu Chen, Alexander Hauptmann June 2004 Proceedings of the 2004 joint ACM/IEEE conference on Digital libraries

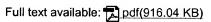


Full text available: pdf(270.69 KB) Additional Information: full citation, abstract, references, index terms

This paper describes a comprehensive approach to construct robust multi-modal video classification on a specific digital source, broadcast news. Broadcast news has a very stable structure and every segment has its specific purpose. Video classification can support fundamental understanding of the structure of the video and the content. The variety of video content makes it hard to classify; however, it also provides multimodal information Our approach tries to solve two important issues of multi ...

Searching in metric spaces

Edgar Chávez, Gonzalo Navarro, Ricardo Baeza-Yates, José Luis Marroquín September 2001 ACM Computing Surveys (CSUR), Volume 33 Issue 3



Additional Information: full citation, abstract, references, citings, index terms

The problem of searching the elements of a set that are close to a given query element under some similarity criterion has a vast number of applications in many branches of computer science, from pattern recognition to textual and multimedia information retrieval. We are interested in the rather general case where the similarity criterion defines a metric space, instead of the more restricted case of a vector space. Many solutions have been proposed in different areas, in many cases without cros ...

Keywords: Curse of dimensionality, nearest neighbors, similarity searching, vector spaces

Applications: An evolutionary optimization approach for 3D human head model classification



Hau-San Wong, Kent K. T. Cheung, Horace H. S. Ip

November 2003 Proceedings of the 5th ACM SIGMM international workshop on Multimedia information retrieval

Full text available: pdf(677.93 KB) Additional Information: full citation, abstract, references, index terms

Classification of 3-D head models based on their shape attributes for subsequent indexing and retrieval are important in many applications, as in the selection and generation of human characters in virtual scenes, and the composition of morphing sequences requiring a qualitatively similar target head model. Simple feature representations are more efficient but may not be adequate for distinguishing the subtly different head model classes. In view of these, we propose an optimization approach bas ...

Keywords: 3D head model, evolutionary computation, genetic algorithm, multiple classifier system, pattern classification

8 Poster session 1: Analysis of emotion recognition using facial expressions, speech and multimodal information

Carlos Busso, Zhigang Deng, Serdar Yildirim, Murtaza Bulut, Chul Min Lee, Abe Kazemzadeh, Sungbok Lee, Ulrich Neumann, Shrikanth Narayanan

October 2004 Proceedings of the 6th international conference on Multimodal interfaces

Full text available: pdf(321.19 KB) Additional Information: full citation, abstract, references, index terms

The interaction between human beings and computers will be more natural if computers are able to perceive and respond to human non-verbal communication such as emotions. Although several approaches have been proposed to recognize human emotions based on facial expressions or speech, relatively limited work has been done to fuse these two, and other, modalities to improve the accuracy and robustness of the emotion recognition system. This paper analyzes the strengths and the limitations of sys ...

Keywords: PCA, SVC, affective states, decision level fusion, emotion recognition, feature level fusion, human-computer interaction (HCI), speech, vision

RCV1: A New Benchmark Collection for Text Categorization Research David D. Lewis, Yiming Yang, Tony G. Rose, Fan Li August 2004 The Journal of Machine Learning Research, Volume 5

Full text available: pdf(628.29 KB) Additional Information: full citation, abstract, citings, index terms

Reuters Corpus Volume I (RCV1) is an archive of over 800,000 manually categorized newswire stories recently made available by Reuters, Ltd. for research purposes. Use of this data for research on text categorization requires a detailed understanding of the real world constraints under which the data was produced. Drawing on interviews with Reuters personnel and access to Reuters documentation, we describe the coding policy and quality control procedures used in producing the RCV1 data, the inten ...

10 Technical poster session 1: multimedia analysis, processing, and retrieval: Video segmentation combining similarity analysis and classification Matthew Cooper

October 2004 Proceedings of the 12th annual ACM international conference on Multimedia

Full text available: pdf(337.27 KB) Additional Information: full citation, abstract, references, index terms

In this paper, we compare several recent approaches to video segmentation using pairwise similarity. We first review and contrast the approaches within the common framework of similarity analysis and kernel correlation. We then combine these approaches with nonparametric supervised classification for shot boundary detection. Finally, we discuss

comparative experimental results using the 2002 TRECVID shot boundary detection test collection.

Keywords: temporal media indexing and segmentation

11 <u>Surveillance: Multi-camera spatio-temporal fusion and biased sequence-data learning for security surveillance</u>



Gang Wu, Yi Wu, Long Jiao, Yuan-Fang Wang, Edward Y. Chang

November 2003 Proceedings of the eleventh ACM international conference on Multimedia

Full text available: pdf(281.72 KB) Additional Information: full citation, abstract, references, index terms

We present a framework for multi-camera video surveillance. The framework consists of three phases: detection, representation, and recognition. The detection phase handles multi-source spatio-temporal data fusion for efficiently and reliably extracting motion trajectories from video. The representation phase summarizes raw trajectory data to construct hierarchical, invariant, and content-rich descriptions of the motion events. Finally, the recognition ph ...

12 Meaningful term extraction and discriminative term selection in text categorization via unknown-word methodology



Yu-Sheng Lai, Chung-Hsien Wu

March 2002 ACM Transactions on Asian Language Information Processing (TALIP), Volume 1 Issue 1

Full text available: pdf(920.43 KB) Additional Information: full citation, abstract, references, index terms

In this article, an approach based on unknown words is proposed for meaningful term extraction and discriminative term selection in text categorization. For meaningful term extraction, a phrase-like unit (PLU)-based likelihood ratio is proposed to estimate the likelihood that a word sequence is an unknown word. On the other hand, a discriminative measure is proposed for term selection and is combined with the PLU-based likelihood ratio to determine the text category. We conducted several experim ...

Keywords: AC-machine, dimensionality reduction, discriminability, discriminative term selection, inconsistency problem, meaningful term extraction, n-gram, phrase-like unit, sparse data problem, term adaptation, term purification, text categorization, text indexing, unknown word detection, vector space modeling

13 Audio Processing: A robust audio classification and segmentation method Lie Lu, Hao Jiang, HongJiang Zhang



Full text available: pdf(431.77 KB)

Additional Information: full citation, abstract, references, citings, index terms, review

In this paper, we present a robust algorithm for audio classification that is capable of segmenting and classifying an audio stream into speech, music, environment sound and silence. Audio classification is processed in two steps, which makes it suitable for different applications. The first step of the classification is speech and non-speech discrimination. In this step, a novel algorithm based on KNN and LSP VQ is presented. The second step further divides non-speech class into music, environm ...

Keywords: audio classification and segmentation, audio content analysis

14 Technical poster session 1: multimedia analysis, processing, and retrieval: A content based image retrieval system based on the fuzzy ARTMAP architecture Mutlu Uysal, Fatos Yarman-Vural



October 2004 Proceedings of the 12th annual ACM international conference on Multimedia

Full text available: Ddf(294.32 KB) Additional Information: full citation, abstract, references, index terms

This study deals with designing a flexible feature space for Content Based Image retrieval Systems (CBIR). For this purpose, initially, a large variety of features are extracted from the regions of the pre-segmented images. Then, the feature set of each object class is learned using the Fuzzy Art Map Architecture, by identifying the weights of each feature for each object class.

In the querying phase, trained set of feature weights are used to find the label of each object class. This ...

Keywords: CBIR, fuzzy ARTMAP, region-based object retrieval

15 Index-driven similarity search in metric spaces

Gisli R. Hjaltason, Hanan Samet

December 2003 ACM Transactions on Database Systems (TODS), Volume 28 Issue 4

Full text available: pdf(650.64 KB) Additional Information: full citation, abstract, references, index terms

Similarity search is a very important operation in multimedia databases and other database applications involving complex objects, and involves finding objects in a data set S similar to a query object q, based on some similarity measure. In this article, we focus on methods for similarity search that make the general assumption that similarity is represented with a distance metric d. Existing methods for handling similarity search in this setting typically fall into one of ...

Keywords: Hiearchical metric data structures, distance-based indexing, nearest neighbor queries, range queries, ranking, similarity searching

16 VideoTrails: representing and visualizing structure in video sequences

Vikrant Kobla, David Doermann, Christos Faloutsos

November 1997 Proceedings of the fifth ACM international conference on Multimedia

Additional Information: full citation, references, citings, index terms Full text available: pdf(2.03 MB)

17 Poster: A two-stage fingerprint classification system

Raffaele Cappelli, Dario Maio, Davide Maltoni, Loris Nanni

November 2003 Proceedings of the 2003 ACM SIGMM workshop on Biometrics methods and applications

Full text available: pdf(607.18 KB) Additional Information: full citation, abstract, references, index terms

In this paper we describe a fingerprint classification system based on a two-stage sequential architecture: an MKL-based classifier is first used to select the two-most-likely classes and then a second classifier (specifically trained to discriminate between the two classes) is then adopted for the final decision. The experimentation performed on NIST Special Database 4. which is one of the most important benchmarks in this area, shows that the new approach yields an error rate lower than previo ...

Keywords: classifier combination, directional image, feature selection, fingerprint classification, subspace classifiers

18 Enhanced hypertext categorization using hyperlinks

Soumen Chakrabarti, Byron Dom, Piotr Indyk

June 1998 ACM SIGMOD Record, Proceedings of the 1998 ACM SIGMOD international conference on Management of data, Volume 27 Issue 2

Full text available: pdf(1.91 MB)

Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index</u> terms

A major challenge in indexing unstructured hypertext databases is to automatically extract meta-data that enables structured search using topic taxonomies, circumvents keyword ambiguity, and improves the quality of search and profile-based routing and filtering. Therefore, an accurate classifier is an essential component of a hypertext database. Hyperlinks pose new problems not addressed in the extensive text classification literature. Links clearly contain high-quality semantic clues that ...

19 <u>Cluster ensembles --- a knowledge reuse framework for combining multiple partitions</u>
Alexander Strehl, Joydeep Ghosh



March 2003 The Journal of Machine Learning Research, Volume 3

Full text available: 🔁 pdf(842.50 KB)

Additional Information: <u>full citation</u>, <u>abstract</u>, <u>references</u>, <u>citings</u>, <u>index</u> terms

This paper introduces the problem of combining multiple partitionings of a set of objects into a single consolidated clustering *without* accessing the features or algorithms that determined these partitionings. We first identify several application scenarios for the resultant 'knowledge reuse' framework that we call *cluster ensembles*. The cluster ensemble problem is then formalized as a combinatorial optimization problem in terms of shared mutual information. In addition to a direct ...

Keywords: cluster analysis, clustering, consensus functions, ensemble, knowledge reuse, multi-learner systems, mutual information, partitioning, unsupervised learning

20 Applications II: Repeating pattern discovery and structure analysis from acoustic music data



Lie Lu, Muyuan Wang, Hong-Jiang Zhang

October 2004 Proceedings of the 6th ACM SIGMM international workshop on Multimedia information retrieval

Full text available: pdf(380.44 KB) Additional Information: full citation, abstract, references, index terms

Music and songs usually have repeating patterns and prominent structure. The automatic extraction of such repeating patterns and structure is useful for further music summarization, indexing and retrieval. In this paper, an effective approach of repeating pattern discovery and structure analysis of acoustic music data is proposed. In order to represent the melody similarity more accurately, in our approach, Constant Q transform is utilized in feature extraction and a novel similarity measure ...

Keywords: CQT, music structure, repeating pattern, structure-based distance measure

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21 Sensor fusion weighting measures in Audio-Visual Speech Recognition

window

Trent W. Lewis, David M. W. Powers

January 2004 Proceedings of the 27th conference on Australasian computer science -Volume 26

Full text available: pdf(768.52 KB) Additional Information: full citation, abstract, references

Audio-Visual Speech Recognition (AVSR) uses vision to enhance speech recognition but also introduces the problem of how to join (or fuse) these two signals together. Mainstream research achieves this using a weighted product of the output of the phoneme classifiers for both modalities. This paper analyses current weighting measures and compares them to several new measures proposed by the authors. Most importantly, when calculating the dispersion of the output there is a shift from analysing the ...

Keywords: neural networks, sensor fusion, speech recognition

22 Boosting margin based distance functions for clustering

Tomer Hertz, Aharon Bar-Hillel, Daphna Weinshall

July 2004 Twenty-first international conference on Machine learning

Full text available: pdf(181.49 KB) Additional Information: full citation, abstract, references

The performance of graph based clustering methods critically depends on the quality of the distance function used to compute similarities between pairs of neighboring nodes. In this paper we learn distance functions by training binary classifiers with margins. The classifiers are defined over the product space of pairs of points and are trained to distinguish whether two points come from the same class or not. The signed margin is used as the distance value. Our main contribution is a distance I ...

²³ Learning to recommend from positive evidence

Ingo Schwab, Wolfgang Pohl, Ivan Koychev

January 2000 Proceedings of the 5th international conference on Intelligent user interfaces

Full text available: pdf(1.62 MB)

Additional Information: full citation, abstract, references, citings, index terms

In recent years, many systems and approaches for recommending information, products or other objects have been developed. In these systems, often machine learning methods that need training input to acquire a user interest profile are used. Such methods typically need

positive and negative evidence of the user's interests. To obtain both kinds of evidence, many systems make users rate relevant objects explicitly. Others merely observe the user's behavior, which fairly obviously yields posit ...

Keywords: adaptive recommendation interfaces, evaluation of methods, machine learning, user modeling

Audio-visual speech recognition using red exclusion and neural networks Trent W. Lewis, David M. W. Powers



Full text available: pdf(984.26 KB) Additional Information: full citation, abstract, references, index terms

Automatic speech recognition (ASR) performs well under restricted conditions, but performance degrades in noisy environments. Audio-Visual Speech Recognition (AVSR) combats this by incorporating a visual signal into the recognition. This paper briefly reviews the contribution of psycholinguistics to this endeavour and the recent advances in machine AVSR. An important first step in AVSR is that of feature extraction from the mouth region and a technique developed by the authors is breifly present ...

Keywords: audio-visual speech recogition, neural networks, sensor fusion

25 Extracting sentence segments for text summarization: a machine learning approach Wesley T. Chuang, Jihoon Yang

July 2000 Proceedings of the 23rd annual international ACM SIGIR conference on Research and development in information retrieval

Full text available: pdf(945.26 KB)

Additional Information: full citation, abstract, references, citings, index terms

With the proliferation of the Internet and the huge amount of data it transfers, text summarization is becoming more important. We present an approach to the design of an automatic text summarizer that generates a summary by extracting sentence segments. First, sentences are broken into segments by special cue markers. Each segment is represented by a set of predefined features (e.g. location of the segment, average term frequencies of the words occurring in the segment, number of title words ...

Keywords: machine learning, sentence segment extraction, text summarization

26 <u>Learning primitive and scene semantics of images for classification and retrieval</u> Cheong Yiu Fung, Kai Fock Loe

October 1999 Proceedings of the seventh ACM international conference on Multimedia (Part 2)

Full text available: pdf(724.15 KB) Additional Information: full citation, references, citings, index terms

Keywords: image retrieval, image semantics, machine learning

27 Poster: Integrated Wavelet and Fourier-Mellin invariant feature in fingerprint verification system

T. B. J. Andrew, N. C. L. David

November 2003 Proceedings of the 2003 ACM SIGMM workshop on Biometrics methods

and applications

Full text available: pdf(320.02 KB) Additional Information: full citation, abstract, references, index terms

Today, minutiae-based and image-based are the two major approaches for the purpose of fingerprint authentication. Image based approach offers much higher computation efficiency with minimum pre-processing and proves also effective even when the image quality is too low to allow a reliable minutia extraction. However, this approach is vulnerable to shape distortions as well as variation in position, scale and orientation angle. In this paper, a novel method of image based fingerprint matching bas ...

Keywords: Fourier-Mellin Transform, Wavelet Transform, fingerprint verification, invariant features

28 Digital video segmentation

A. Hampapur, T. Weymouth, R. Jain

October 1994 Proceedings of the second ACM international conference on Multimedia

Full text available: pdf(804.31 KB)

Additional Information: full citation, abstract, references, citings, index terms

The data driven, bottom up approach to video segmentation has ignored the inherent structure that exists in video. This work uses the model driven approach to digital video segmentation. Mathematical models of video based on video production techniques are formulated. These models are used to classify the edit effects used in video and film production. The classes and models are used to systematically design the feature detectors for detecting edit effects in digital video. Digital video se ...

29 Oral I: The eyes have it

Terry Riopka, Terrance Boult

November 2003 Proceedings of the 2003 ACM SIGMM workshop on Biometrics methods and applications

Full text available: pdf(529.11 KB) Additional Information: full citation, abstract, references, index terms

This paper evaluates the impact of eye localization on face recognition accuracy. To investigate its importance, we present an eye perturbation sensitivity analysis, as well as empirical evidence that reinforces the notion that eye localization plays a key role in the accuracy of face recognition systems. In particular, correct measurement of eye separation is shown to be more important than correct eye location, highlighting the critical role of eye separation in the scaling and normalization o ...

Keywords: EBGM, FaceIt, PCA, biometrics, eye localization, face recognition

30 Learning I: Boosting contextual information in content-based image retrieval Jaume Amores, Nicu Sebe, Petia Radeva, Theo Gevers, Arnold Smeulders October 2004 Proceedings of the 6th ACM SIGMM international workshop on Multimedia information retrieval

Full text available: pdf(254.37 KB) Additional Information: full citation, abstract, references, index terms

We present a new framework for characterizing and retrieving objects in cluttered scenes. Objects are best represented by characterizing both their parts and the mutual spatial relations among them. This CBIR system is based on a new representation describing every object taking into account the local properties of its parts and their mutual spatial relations, without relying on accurate segmentation. For this purpose, a new multi-dimensional histogram is used that measures the joint distribu ...

Keywords: boosting, content-based image retrieval oject recognition, contextual

information

31 Recognition section: Recognition of two-person interactions using a hierarchical Bayesian network



Sangho Park, J. K. Aggarwal

November 2003 First ACM SIGMM international workshop on Video surveillance

Full text available: pdf(643.17 KB) Additional Information: full citation, abstract, references, index terms

Recognizing human interactions is a challenging task due to the multiple body parts of interacting persons and the concomitant occlusions. This paper presents a method for the recognition of two-person interactions using a hierarchical Bayesian network (BN). The poses of simultaneously tracked body parts are estimated at the low level of the BN, and the overall body pose is estimated at the high level of the BN. The evolution of the poses of the multiple body parts are processed by a dynamic Bay ...

Keywords: Bayesian network, event recognition, hierarchy, human interaction, motion, scene understanding, surveillance

32 Book reviews

September 2001 intelligence, Volume 12 Issue 3

Full text available: pdf(85.17 KB) Additional Information: full citation, references, index terms html(36.51 KB)

33 Research track papers: Towards parameter-free data mining Eamonn Keogh, Stefano Lonardi, Chotirat Ann Ratanamahatana August 2004 Proceedings of the 2004 ACM SIGKDD international conference on

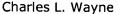


Knowledge discovery and data mining Full text available: pdf(770.63 KB) Additional Information: full citation, abstract, references, index terms

Most data mining algorithms require the setting of many input parameters. Two main dangers of working with parameter-laden algorithms are the following. First, incorrect settings may cause an algorithm to fail in finding the true patterns. Second, a perhaps more insidious problem is that the algorithm may report spurious patterns that do not really exist, or greatly overestimate the significance of the reported patterns. This is especially likely when the user fails to understand the role of par ...

Keywords: anomaly detection, clustering, parameter-free data mining

34 Topic detection and tracking in English and Chinese





Full text available: pdf(688.09 KB) Additional Information: full citation, abstract, references

Topic Detection and Tracking (TDT) refers to automatic techniques for discovering. threading, and retrieving topically related material in streams of data. Newswire and broadcast news are the canonical sources. In 1999, TDT research was extended from English to Chinese, and carefully annotated multilingual corpora were created. Researchers devised clever approaches to the cross-language challenge, and formal performance evaluations yielded very promising results. This paper outlines the 1999 ...

Keywords: detection, segmentation, speech, text, topic, tracking

35 Java implementation of policy-based bandwidth management

S. Jha, M. Hassan

July 2003 International Journal of Network Management, Volume 13 Issue 4

Full text available: pdf(246.57 KB) Additional Information: full citation, abstract, references, index terms

We describe a Java implementation of a policy based bandwidth management system using the standard policy protocols and an interface to the Linux Diffserv implementation. The useful features, such as extensibility and object orientation, of the Java implementation is illustrated by directly referring to the relevant programming codes. Through two practical experiments, we demonstrate the capability of our implementation in supporting policy-based dynamic resource allocations in enterprise networ ...

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Athens, Greece Pages: 152 - 159 Year of Publication: 2000 ISBN:1-58113-226-3

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↑ ABSTRACT

With the proliferation of the Internet and the huge amount of data it transfers, text summarization is becoming more important. We present an approach to the design of an automatic text summarizer that generates a summary by extracting sentence segments. First, sentences are broken into segments by special cue markers. Each segment is represented by a set of predefined features (e.g. location of the segment, average term frequencies of the words occurring in the segment, number of title words in the segment, and the like). Then a supervised learning algorithm is used to train the summarizer to extract important sentence segments, based on the feature vector. Results of experiments on U.S. patents indicate that the performance of the proposed approach compares very favorably with other approaches (including Microsoft Word summarizer) in terms of precision, recall, and classification accuracy.

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Dou Shen, Zheng Chen, Qiang Yang, Hua-Jun Zeng, Benyu Zhang, Yuchang Lu, Wei-Ying Ma, Web-page classification through summarization, Proceedings of the 27th annual international conference on Research and development in information retrieval, July 25-29, 2004, Sheffield, United Kingdom

↑ INDEX TERMS

Primary Classification:

H. Information Systems

+.3 INFORMATION STORAGE AND RETRIEVAL

+.3.1 Content Analysis and Indexing

Subjects: Abstracting methods

Additional Classification:

I. Computing Methodologies

• I.2 ARTIFICIAL INTELLIGENCE

I.2.7 Natural Language Processing

Subjects: <u>Text analysis</u>

General Terms:

Algorithms, Experimentation, Performance, Reliability, Theory

Keywords:

machine learning, sentence segment extraction, text summarization

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Multimodal interaction: Articulatory features for robust visual speech recognition Kate Saenko, Trevor Darrell, James R. Glass

October 2004 Proceedings of the 6th international conference on Multimodal interfaces

Full text available: pdf(358.83 KB) Additional Information: full citation, abstract, references, index terms

Visual information has been shown to improve the performance of speech recognition systems in noisy acoustic environments. However, most audio-visual speech recognizers rely on a clean visual signal. In this paper, we explore a novel approach to visual speech modeling, based on articulatory features, which has potential benefits under visually challenging conditions. The idea is to use a set of parallel classifiers to extract different articulatory attributes from the input images, and then c ...

Keywords: articulatory features, audio-visual speech recognition, multimodal interfaces, speechreading, visual feature extraction

2 Poster session and reception: News video classification using SVM-based multimodal classifiers and combination strategies



Wei-Hao Lin, Alexander Hauptmann

December 2002 Proceedings of the tenth ACM international conference on Multimedia

Full text available: pdf(103.22 KB) Additional Information: full citation, abstract, references, citings

Video classification is the first step toward multimedia content understanding. When video is classified into conceptual categories, it is usually desirable to combine evidence from multiple modalities. However, combination strategies in previous studies were usually ad hoc. We investigate a meta-classification combination strategy using Support Vector Machine, and compare it with probability-based strategies. Text features from closedcaptions and visual features from images are combined to cla ...

3 Content analysis: A mid-level representation framework for semantic sports video analysis



Ling-Yu Duan, Min Xu, Tat-Seng Chua, Qi Tian, Chang-Sheng Xu

November 2003 Proceedings of the eleventh ACM international conference on Multimedia

Full text available: pdf(1.42 MB)

Additional Information: full citation, abstract, references, index terms

Sports video has been widely studied due to its tremendous commercial potentials. Despite

encouraging results from various specific sports games, it is almost impossible to extend a system for a new sports game because they usually employ different sets of low-level features appropriate for the specific games and closely coupled with the use of game specific rules to detect events or highlights. There is a lack of internal representation and structure to be generic and applicable for many differ ...

Keywords: events, mid-level representation, semantics, sports video

Sensor fusion weighting measures in Audio-Visual Speech Recognition Trent W. Lewis, David M. W. Powers



January 2004 Proceedings of the 27th conference on Australasian computer science - Volume 26

Full text available: pdf(768.52 KB) Additional Information: full citation, abstract, references

Audio-Visual Speech Recognition (AVSR) uses vision to enhance speech recognition but also introduces the problem of how to join (or fuse) these two signals together. Mainstream research achieves this using a weighted product of the output of the phoneme classifiers for both modalities. This paper analyses current weighting measures and compares them to several new measures proposed by the authors. Most importantly, when calculating the dispersion of the output there is a shift from analysing the ...

Keywords: neural networks, sensor fusion, speech recognition

5 Audio-visual speech recognition using red exclusion and neural networks Trent W. Lewis, David M. W. Powers



January 2002 Australian Computer Science Communications, Proceedings of the twenty-fifth Australasian conference on Computer science - Volume 4, Volume 24 Issue 1

Full text available: pdf(984.26 KB) Additional Information: full citation, abstract, references, index terms

Automatic speech recognition (ASR) performs well under restricted conditions, but performance degrades in noisy environments. Audio-Visual Speech Recognition (AVSR) combats this by incorporating a visual signal into the recognition. This paper briefly reviews the contribution of psycholinguistics to this endeavour and the recent advances in machine AVSR. An important first step in AVSR is that of feature extraction from the mouth region and a technique developed by the authors is breifly present ...

Keywords: audio-visual speech recogition, neural networks, sensor fusion

6 Poster session 1: Analysis of emotion recognition using facial expressions, speech and multimodal information



Carlos Busso, Zhigang Deng, Serdar Yildirim, Murtaza Bulut, Chul Min Lee, Abe Kazemzadeh, Sungbok Lee, Ulrich Neumann, Shrikanth Narayanan

October 2004 Proceedings of the 6th international conference on Multimodal interfaces

Full text available: pdf(321.19 KB) Additional Information: full citation, abstract, references, index terms

The interaction between human beings and computers will be more natural if computers are able to perceive and respond to human non-verbal communication such as emotions. Although several approaches have been proposed to recognize human emotions based on facial expressions or speech, relatively limited work has been done to fuse these two, and other, modalities to improve the accuracy and robustness of the emotion recognition system. This paper analyzes the strengths and the limitations of sys ...

Keywords: PCA, SVC, affective states, decision level fusion, emotion recognition, feature

level fusion, human-computer interaction (HCI), speech, vision

7 Audio Processing: A robust audio classification and segmentation method Lie Lu, Hao Jiang, HongJiang Zhang October 2001 Proceedings of the ninth ACM international conference on Multimedia



Full text available: pdf(431.77 KB)

Additional Information: full citation, abstract, references, citings, index terms, review

In this paper, we present a robust algorithm for audio classification that is capable of segmenting and classifying an audio stream into speech, music, environment sound and silence. Audio classification is processed in two steps, which makes it suitable for different applications. The first step of the classification is speech and non-speech discrimination. In this step, a novel algorithm based on KNN and LSP VQ is presented. The second step further divides non-speech class into music, environm ...

Keywords: audio classification and segmentation, audio content analysis

8 Research track posters: Semantic representation: search and mining of multimedia content



Apostol (Paul) Natsev, Milind R. Naphade, John R. Smith

August 2004 Proceedings of the 2004 ACM SIGKDD international conference on Knowledge discovery and data mining

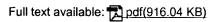
Full text available: pdf(158.48 KB) Additional Information: full citation, abstract, references, index terms

Semantic understanding of multimedia content is critical in enabling effective access to all forms of digital media data. By making large media repositories searchable, semantic content descriptions greatly enhance the value of such data. Automatic semantic understanding is a very challenging problem and most media databases resort to describing content in terms of low-level features or using manually ascribed annotations. Recent techniques focus on detecting semantic concepts in video, such as ...

Keywords: TRECVID, model vectors, semantic indexing

Searching in metric spaces

Edgar Chávez, Gonzalo Navarro, Ricardo Baeza-Yates, José Luis Marroquín September 2001 ACM Computing Surveys (CSUR), Volume 33 Issue 3



Additional Information: full citation, abstract, references, citings, index terms

The problem of searching the elements of a set that are close to a given query element under some similarity criterion has a vast number of applications in many branches of computer science, from pattern recognition to textual and multimedia information retrieval. We are interested in the rather general case where the similarity criterion defines a metric space, instead of the more restricted case of a vector space. Many solutions have been proposed in different areas, in many cases without cros ...

Keywords: Curse of dimensionality, nearest neighbors, similarity searching, vector spaces

10 Technical poster session 1: multimedia analysis, processing, and retrieval: Video segmentation combining similarity analysis and classification Matthew Cooper



October 2004 Proceedings of the 12th annual ACM international conference on

Multimedia

Full text available: pdf(337.27 KB) Additional Information: full citation, abstract, references, index terms

In this paper, we compare several recent approaches to video segmentation using pairwise similarity. We first review and contrast the approaches within the common framework of similarity analysis and kernel correlation. We then combine these approaches with nonparametric supervised classification for shot boundary detection. Finally, we discuss comparative experimental results using the 2002 TRECVID shot boundary detection test collection.

Keywords: temporal media indexing and segmentation

11 Book reviews

September 2001 intelligence, Volume 12 Issue 3

Full text available: pdf(85.17 KB) Additional Information: full citation, references, index terms html(36.51 KB)

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1 Dynamic behavior analysis in compressed fingerprint videos

Dorai, C.; Ratha, N.K.; Bolle, R.M.;

Circuits and Systems for Video Technology, IEEE Transactions on ,Volume:

14 , Issue: 1 , Jan. 2004

Pages: 58 - 73

[Abstract] [PDF Full-Text (1448KB)] IEEE JNL

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7 Iris individuality: A partial iris model

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Pattern Recognition, 2004. ICPR 2004. Proceedings of the 17th International

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[Abstract] [PDF Full-Text (296KB)] IEEE CNF

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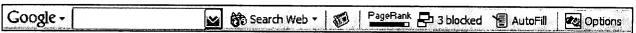
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....rules that each scene class category must follow. As such, the resulting solution depends on the scene definition and the appropriateness of the rules. Here, we describe an HMM based classifier for TV program categorization, which is driven by training data, instead of manually devised rules [40] [41]. Similar framework can be applied to other classification categorization tasks. NOVEMBER 2000 IEEE SIGNAL PROCESSING MAGAZINE 25 Our use of HMM to model a video program is motivated by the fact that the feature values of different programs at any time instant can be similar. Their temporal ....

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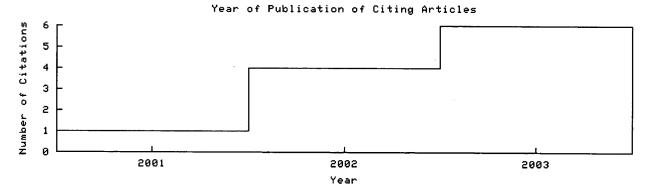
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